

IN THE CLAIMS:

Kindly amend claims 6-14 and 17 as follows:

1. (Original) A waveguide optical amplifier, characterized in that a surface light emission source for pumping driven electrically is provided adjacently to and integrally with an optical waveguide doped with a light-emitting species, in the longitudinal direction of the optical waveguide.
2. (Original) A waveguide optical amplifier, according to claim 1, wherein the light-emitting species is a rare earth element.
3. (Original) A waveguide optical amplifier, according to claim 2, wherein the light-emitting species is erbium.
4. (Original) A waveguide optical amplifier, according to claim 1, wherein the surface light emission source for pumping is installed at least on one side of the optical waveguide.
5. (Original) A waveguide optical amplifier, according to claim 1, wherein plural surface light emission sources for pumping are installed around the optical waveguide.
6. (Currently Amended) A waveguide optical amplifier, according to ~~any one of claims~~ claim 1 through 5, wherein the optical waveguide is a planar optical waveguide.
7. (Currently Amended) A waveguide optical amplifier, according to ~~any one of claims~~ claim 1 through 5, wherein the optical waveguide is an optical fiber.
8. (Currently Amended) A waveguide optical amplifier, according to ~~any one of claims~~ claim 1 through 7, wherein plural integral sets, each consisting of an optical waveguide and a surface light emission source for pumping, are arrayed on a substrate.
9. (Currently Amended) A waveguide optical amplifier, according to ~~any one of claims~~

claim 1 through 7, wherein plural optical waveguides are arrayed on a substrate, integrally together with a common surface light emission source for pumping.

10. (Currently Amended) A waveguide optical amplifier, according to ~~any one of claims claim 1 through 9~~, wherein the material of the optical waveguide(s) is silica-based inorganic glass.

11. (Currently Amended) A waveguide optical amplifier, according to ~~any one of claims claim 1 through 9~~, wherein the material of the optical waveguide(s) is multicomponent oxide glass.

12. (Currently Amended) A waveguide optical amplifier, according to ~~any one of claims claim 1 through 9~~, wherein the material of the optical waveguide(s) is inorganic fluoride glass.

13. (Currently Amended) A waveguide optical amplifier, according to ~~any one of claims claim 1 through 9~~, wherein the material of the optical waveguide(s) is an organic polymer.

14. (Currently Amended) A waveguide optical amplifier, according to ~~any one of claims claim 1 through 13~~, wherein the surface light emission source for pumping is an electroluminescent light source.

15. (Original) A waveguide optical amplifier, according to claim 14, wherein the electroluminescent light source is an inorganic electroluminescent light source.

16. (Original) A waveguide optical amplifier, according to claim 15, wherein the light-emitting species of the inorganic electroluminescent light source is ytterbium (Yb).

17. (Currently Amended) A waveguide optical amplifier, according to claim 15 ~~or 16~~, wherein the inorganic electroluminescent light source contains neodymium (Nd) as a sensitizer.